



THE CHIP PILE

THE NEWSLETTER OF THE CENTRAL TEXAS WOODTURNERS ASSOCIATION
AUSTIN, TEXAS

A CHAPTER OF THE AMERICAN ASSOCIATION OF WOODTURNERS

CTWA Meetings

AUGUST MEETING

Tuesday, August 16, 2005
7:00 - 9:00 PM
American YouthWorks - Austin, Texas
1901 East SH 71
(about 1/4 mile east of I-35 on south side of SH 71)

FIRST SATURDAY TURNOUT

Don't forget the First Saturday Turn Out at Charlie Collin's shop, 1603 Hydro Drive, Austin, the first Saturday of every month, from 9 - 12 AM. Turn west on Howard Lane off I-35, take the third right on Thermal Drive and the first left on Hydro Drive.

CHECK WEBSITE FOR ANY CHANGES!

From the President's Shop

Fall Heat

August is the month of heat. I'm not just talking Celsius and Fahrenheit temperatures, but commenting on significant needs for the club that are coming up in the fall. The fall quarter cools down and we all hit the shop, or studio for the more advanced, and just enjoy the chips and dust. However, fall is also the time for SWAT (i.e., road trip) and Club elections and the annual Christmas Party.

SWAT is a big commitment for CTWA. We have obligated our club to manning the registration desk and to maintaining a room (set-up, cameras and cleaning, etc.). So think about helping out. If we all do a little then no one has to do it all.

the easiest of the positions since delegation of responsibility is the mark of good leadership. You don't have to do it all yourself.

The Christmas Party is an annual tradition that always draws a lot of folks. If you would like to volunteer your shop and home, grounds, farm or whatever for the Christmas Party, let me know.

Spring of next year will be here sooner than we think. We need to think about a spring CTWA symposium again for next year, and who we want to be the demonstrator for that event.

I will be calling a Board meeting shortly to deal with all of these issues. Let me know if you can help with any of these things.

Stay cool and drink lots of water. See you on August 16.

Fred Stidman

Elections are also coming up soon. We need nominees for a President-Elect and a Program Chairman. Talk to people you think would make a good candidate, or if you are interested yourself, talk to one of the present officers to put your hat in the ring for the election. If you are shy or don't know anyone, call me and I will make sure that all interested parties are in the running. Remember these positions have a vote on the Board and help shape the club into the organization you most desire. President is

July Demo

Getting a Handle on Things

Long-time Hill Country Turners stalwart **Uel Clanton** of Kerrville was our demonstrator for July. Uel gave us an excellent lesson in spindle turning, as he turned one of his trademark tool handles.

Uel began his presentation by explaining how he makes ferrules for his tool handles. Rather than use sections of



copper pipe or copper or brass fittings to make ferrules, he makes his ferrules out of stainless steel. He gets his stainless steel stock as scraps from the installation of shower and bath pulls and supports for the handicapped. He cuts the section for a ferrule with an abrasive saw, after beveling the edge with a belt sander.

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The American Association of Woodturners is "dedicated to Providing Education, Information and Organization to Those Interested in Woodturning." In keeping with the standards of our National Organization, the Central Texas Woodturners Association hereby gives permission for all other woodturning chapters, organizations, magazines and newspapers to use any materials contained herein for the benefit of all woodturners everywhere. We ask that credit be given for the source of the material.

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CTWA Web Site

www.ctwa.org

Editorial Information

This newsletter is by and for members. The Editor welcomes any written materials and will provide assistance with getting your information into publishable form if you want. **DEADLINE IS THE FIRST MONDAY OF THE MONTH.** Contact me with your ideas and drafts by phone at 512.295.2144, by E-mail at ckay@austin.rr.com or mail them to:

THE CHIP PILE
c/o Charles Kay
100 Matzig Cove
Buda TX 78610-3108

He removes the sharp projections from the inside of the ferrule by hand,



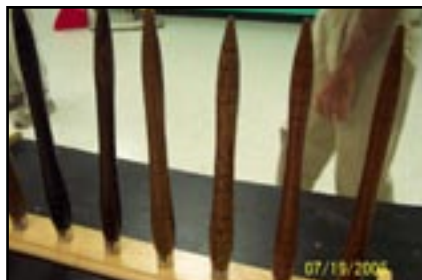
using a shop-made scraper consisting of a three-cornered file that has been smoothed and mounted in a mesquite handle.

He began his demonstration by chucking a 16-inch blank between centers, using a Stebcenter drive. He laid out the drive center end and cut it to size for the id of the ferrule, using a square end scraper. The scraper has been modified to his own design by grinding about the end one inch of the scraper at a 45 degree angle on the edges of both sides and the end. He then



proceeded to shape the ferrule end of the handle, using his modified roughing gouge. He then removed the piece from the lathe and glued the ferrule in place with cyanoacrylate glue. He then recentered the piece and shaped the rest of it with the modified roughing gouge.

When that operation was complete, he sanded the handle and laid out his



characteristic series of lines. He cut small vee grooves on each of the lines, using a skew chisel laid on its side (although he normally uses a triple point tool). He then burned a line in

each of these grooves using a wire, before resanding the handle with 320 grit.

He fits the handle to the tool by drilling a 3/16" pilot hole in the Stebcenter pimple. He then drills a 1/4" hole or whatever is needed to fit the tool tang, going up with progressive drill bits, going up 1/8" at a time. He then recenters the handle again and wipes on a lacquer finish. Then a parting tool is used to remove most of the ferrule overhang, before parting off at the tailstock end. A belt sander is used to clean up the rest of the drive center end to the ferrule.

Thanks to Uel for an informative demonstration, and particularly for donating a couple of his tool handles for our Bring Back Raffle.

Bring Back Raffle

Roger Gardner was the winner of a mesquite bowl turned by **Gene Stokes**. **Johnny Tolly** took home a sycamore and mahogany confetti light turned by **Charlie Kay**. **Bill Hammack** had the lucky ticket for a red oak plate turned by **Mack Peterson**. **Jim Canady** took home an IOU from **Karl Keip**, who was ill and unable to attend the meeting. **Dave Dick** and visitor **Chuck White** were both winners of tool handles graciously donated



by **Uel Clanton**, our demonstrator for the evening.

All of the winners except visitor **Chuck White** will bring back a turned item to the next meeting. These items should be representative of each person's best work.

It should be noted that the Bring Back Raffle is meant to be a fun event. No one is grading you on the quality of your work. Just bring a piece that represents the best that YOU can do. If you don't have a lathe or feel like you have enough experience, contact one of our Volunteer Instructors to help you prepare a Bring Back piece.

So buy a ticket and get involved and have fun.

Web Site

You may want to check out the CTWA Web Site at www.CTWA.org. If you have comments, suggestions or something for the gallery, get in touch with **Webmaster Larry Walrath** at larry@larrywalrath.com.

Show and Tell

Drew Shelton brought two bowls, one of marimba and one of mystery wood.

Larry Walrath showed three plates, of pecan and poplar, nicely decorated



by his wife.



walnut flower holder finished with walnut oil.

Bob Truesdale brought along a number of pieces, including bowls of bocote and pecan.

As you can see, there are some

finished with gloss lacquer.

Joel Crabbe showed off a two-handled mead bowl of mulberry and copper, finished with sanding sealer and wax.



pieces here that seem not to be described in the narrative. In addition, there were many more pieces on the display table than there were description cards. I like to show as many pieces as I can, and



credit everyone who brought something, but you have to fill out the cards.



Bill Hammack shared one of his trademark pregnant goblets, turned of mahogany and finished with Deft.

Gene Stokes showed off a communion

bowl and chalice, turned from mesquite and finished with water based polyurethane.



Johnny Tolly brought a Jimmy Tolly-style vase turned from mesquite.

Stacey Hager brought pair of lamp pulls, one of Texas ebony, and a scrap bowl turned from ligustrum and finished with lacquer.

Bob Elfant



shared a jar top turned from ipe and finished with Deft and a



Jimmy Tolly brought a burnt rim mesquite bowl, finished with matte lacquer and a hackberry bowl



Thanks to **Drew Shelton** for providing the photos again for this month's meeting.

There were 47 attendees at our July 19, 2005, meeting, including nine visitors. President-Elect Len Brisette presided over the meeting. Len advised us that Charlie



asked for questions and problems that he should bring to the CTWA Board at its meeting in Overland Park, Kansas, at the annual Symposium.

Steve Gottlieb announced that the SWAT Board is looking for candidates for two officer positions in 2006. If you are interested in serving as either Chairman-Elect or Treasurer of SWAT, or have some suggestions for candidates, let Steve or Stacey Hager know.

attendees list, although we didn't run into him.

I was impressed with the demonstrations that I attended at this year's Symposium. Everyone that I attended was well done and I came away from each would a good deal of useful information. Particular highlights for me were demos by Andi Wolf (coloring and woodburning), Chris Stott (boxes), Andre Martel (one of the best I've seen on explaining how to use the tools) and Bob Rosand (lidded box). One addition to this year's program was a youth program, coordinated by Bonnie Klein. I didn't get the number of kids who participated in the program, but twenty lucky kids whose names were drawn took home the mini-lathes that had been used in the program, thanks to Jet.

Collins is closing his furniture repair shop, and eventually will be letting the building go. At that point, we will have to make alternate arrangements for our First Saturday get-togethers. Len is proposing to start out by substituting Shop Crawls.

Len thanked Betty Hager and Jim Spano for setting of the audio-visual equipment for the night and providing the camera coverage, filling in for Frank Miller.

Champion scrounger Stacey Hager has been at it again and came up with some platter blanks and cast Corian urn blanks. These were available in a silent auction during the meeting. Len and Steve Gottlieb promoted this year's SWAT Symposium, set for Wichita Falls, beginning on September 30. They also reminded us that CTWA



is obligated to set-up and maintain one demonstration room, including the camera coverage. Betty Hager reminded us that CTWA is also obligated to set up and run the Registration desk.

Len reminded us that we need to be thinking about officers for next year. While several existing officers have agreed to continue to serve if there are no other candidate, and we have a candidate for President by definition, we need nominees for President-Elect, Librarian and Program Chairman.

Johnny Tolly announced himself as the CTWA representative to AAW, and

August Program

A Little Off Center

Our demonstrator for August will be our own versatile turner, **Craig Timmerman**, freshly back from demonstrating at the AAW Symposium in Kansas City. Craig will be making the first run through of one of his three demonstrations scheduled for SWAT this fall.

In this demo, Craig will be turning a vase on multiple axes. The base will be turned on one axis, then the neck will be turned on a second axis. The two will then be blended together using a series of power tools. In addition to getting a chance to see more of Craig's creative turning, this demo features something turners all like, MORE POWER TOOLS. That should mean lots of noise and lots of dust.

Dave Dick

AAW Symposium

The weekend of July 21 - 24 found 1,067 plus woodturners gathering in Overland Park, Kansas, for the American Association of Woodturners annual Symposium. The weather was straight out of Houston, with temperatures in the high 90s and very high humidity.

CTWA was well represented at the Symposium, with **Johnny and Marcia Tolly, Jack Besperka, Jim and Joy Spano, H. O. and Mary Evans, Charlie and Janie Kay and Neil Martin** as well as Demonstrator **Craig Timmerman**. **Gary Roberts'** name was on the

As usual, the vendor area was a highlight of the weekend, with a large vendor area and plenty of opportunity to interact with vendors and their demonstrators. I'm told that it took a lot of will power to walk off without buying anything. I wouldn't know myself. I was able to pick up some real bargains on a few pieces of wood as folks were winding down.

The Instant Gallery again contained a large selection of truly amazing pieces, including a few that left you scratching your head as to how much a lathe actually had to do with their development. I have included photos of as many of my favorites as I have room for in this newsletter. If you are interested in seeing more, see Johnny Tolly's much larger selection of photos on the web site (www.ctwa.org).

The Saturday Night Banquet and Auction was a massive affair. Amazingly, they succeeded in getting everyone through the buffet lines for KC barbecue and trimmings in relatively short order. Before the Auction, a great many folks were recognized for contributions to the AAW and to woodturning. This included a wooden platter presented to your Editor for third place in the Chapter newsletter competition.

The Auction was interesting and exciting, if virtually interminable. The total take for AAW educational efforts was \$68,000, exceeding the old record of \$52,000 set in 2004. Making the Auction more interesting for CTWA members this year were pieces donated by Johnny Tolly and Craig Timmerman. Johnny's segmented vase, "Spiral Staircase," sold for \$300 and Craig's "Wings of Memory" sold for \$550. Top prices went for a Jacques Vesery/Bonnie Klein top box (\$3,700), a David Ellsworth piece (\$3,600) and a piece by Bin Pho (\$3,300).

All in all, The Symposium was quite a success. The only major criticism I would make is that video coverage in the large rooms needs to be improved substantially. The monitors were way too small to be useful unless you were really close, and the volunteers had only brief training in operating the cameras before the sessions began. Unless they already had video experience, this meant that camera work was often not very useful, even if you could see the monitors. My other gripe was lack of adequate advance information about what to expect in the various demos.

If you've never made a national Symposium, put next year's on your calendar and plan to be in Louisville, Kentucky in July 2006.

Obviously these selections represent some of my favorites. I have many more, and would be happy to share them with you via a CD.

Charlie Kay





Membership in CTWA

New members are welcome to join CTWA at any time. All you need is an interest in woodturning. CTWA membership also requires membership in the American Association of Woodturners (AAW). Local dues are \$25.00 per year, or \$2.10 per month prorated for new members joining during the year. AAW dues are \$40.00 per year for individuals and \$45.00 for families. For that you get a first class quarterly magazine, **American Woodturner**, with excellent articles on woodturning and woodturners, amply illustrated with photographs.

If you are interested in learning more about membership or want to join CTWA, contact our Membership Chairman:

Drew Shelton
112 Oakland Drive
Georgetown, TX 78628
512.863.4651
drew.shelton@sematech.org

Volunteer Instructors

The following turners have generously offered to open their shops and give their time to any member who wants to learn how to sharpen their tools, sharpen their skills, learn how to make a bowl or "test" the newest tool. Check out the people who bring items to Show and Tell. One trait common to all woodturners is that we all like to share, so just ask!

SOUTH

Odie Bull 512.442.2687
Bill Hammack 512.282.0832
Stacey Hager 512.282.1036
Johnny Tolly 512.858.4471
Jimmy Tolly 512.894.0686

NOTE: The Tolly brothers work strange shifts, so they may be available on times other than weekends.

H. O. Evans 512.282.2830

NOTE: Ho would like to confine his assistance to his specialty, segmented turnings.

NORTH

Rusty Myers 512.218.1606
Frank Miller 512.335.4768
Judy Williams 512.836.7897

ROUND ROCK

Larry Walrath 512.255.5379

LOCKHART/SAN MARCOS

David Dick 512.357.6517

ister before September 16, the cost is only \$75, and that includes three lunches. If you choose to go to the



banquet, and you should, that will cost you another \$20. You'll get to see some great turners, including such well-known stars as Bonnie Klein, Alan Lacer, Malcolm Tibbets and Mark Sfirri. That is in addition to well-known regional turners, including three CTWA turners, Lead Demonstrator Craig Timmerman, and both Jimmy and Johnny Tolly. There should be something for everyone, so get your checkbook out and get your registration in. For more details, go to www.swaturner.com.

SWAT Registration Desk

CTWA has again been asked to man the Registration Desk at this year's SWAT Symposium in Wichita Falls. Most of you will recall that we handled that function in 2003 under **Betty Hager's** able direction. We were let off the hook last year as we were the host club for the Symposium in Temple. Betty is coordinating the effort again this year, and will need help from a good many folks to get everything done. The really busy times will be Thursday afternoon, September 29, from 3:00 to 6:00 PM and Friday morning, September 30, from 7:30 AM, probably throughout the morning. In addition to preparing and distributing packets to those who have preregistered, we will be responsible for registering those paying at the door. We also will be selling SWAT merchandise, such as shirts and caps and hawking raffle tickets. If you don't feel qualified to handle the last category, Stacey will be on hand to train you. If you and/or your spouse can assist with the Registration Desk duties, get in touch with Betty. She will undoubtedly be bringing a sign-up sheet, so come to the meeting prepared.

SWAT Demonstration Room

Again this year, CTWA will be sponsoring one of the demonstration rooms. Among the duties this entails are setting up the room, including the lathe and the audio-visual equipment and making sure that all of the needed supplies required by the demonstrator are on hand. We are also responsible for clean-up, and packing everything up when the event is over on Saturday afternoon. Set-up will be on Thursday, September 29, and tear down will be from 3:00 to 5:00 PM on Sunday, October 3. If you can help with these activities, let **Fred Stidman** know.

SWAT Demonstration Room

Joanie Genander is again coordinating a Ladies Program. This includes some tours and some interesting craft opportunities. There will also be a Spouse's Instant Gallery again this year, so if your spouses have some interesting creative activities, encourage them to bring samples along to share with folks. More details on the Ladies Program can be found at www.swaturner.com. GUYS, it is up to you to see that this information is passed on to your spouse. For details, go to www.swaturner.com.

E-mail

It is your responsibility to see that Membership Chairman **Drew Shelton** has your correct E-mail address. You can contact him at drew.shelton@sematech.org. We regularly use E-mail to advise members of important announcements on short notice. If Drew doesn't have your current E-mail address, we can't contact you.

Photo Credits

Photographs for this month's **CHIP PILE** were provided by **Drew Shelton, Frank Miller** and **Charles Kay**. If you have digital photos that you would like to have considered for use in the newsletter. Send them to the Editor at ckay@austin.rr.com.

SWAT 2005

SWAT News

If you haven't already registered for SWAT 2005, there is still time to do so and save some money. If you get your registration in before September 16, you save \$10 for a single registration or \$20 for couples. As the world's second largest symposium (after the AAW annual symposium)

SWAT is a real bargain. If you reg-

First Saturday

Saturday, August 6, found the usual bunch of older slackers gathering in **Charlie Collins' shop**, along with some younger folks, a few newcomers and a long-time member we thought had disappeared, **Rusty Myers**.

Jim Spano was there with his mini-lathe showing us how to turn wooden pens using as inserts the cartridges from cheap Bic pens. He was using sections of reclaimed pool cues (been visiting Biker Bars, Jim?).



business. Bob talked your Scribe into photographing some of the items Charlie wants sent to go to a good home (see the Classified Ad section), but being a better photographer than computer user, your Scribe managed to lose all of the photos. Thanks to **Frank Miller** for stepping into the gap and providing some shots of folks at the First Saturday gathering.



As usual, we all had a good time, turning and swapping tales. The next few months First Saturday will be in a state of flux. For September, First Saturday is scheduled for Labor Day weekend. Added to that, sometime this



He had conveniently drilled 1/4" holes in each of the blanks. He got lots of takers willing to try their hand, using his simple set-up which uses a long 1/4" drill bit as a mandrel. Sounds like a demo to me.

Rusty Myers roughed out a box, then shared the use of a protected hollowing tool, which a number of folks were willing to try out. **Bill Hammack** was using the big Powermatic to turn some tiny hubcaps for a little wooden wagon Charlie had there for repair, before moving on to turn a little vase for this month's bring-back. **Frank**



fall, Charlie will probably be vacating his shop, and we will be starting on the First Saturday rotations to various shops. In short, it would pay to

Miller was again turning one of his desk pens using his vacuum gouge and his quiet Fein vacuum.

Bob Hrehor spent the morning trying to hawk stuff that Charlie is trying to get rid of so he can move out of the shop. Charlie wasn't there, being off to Dallas on some family



check the web site (www.ctwa.org) regularly to be sure what the plans are for First Saturday over the next several months.

CTWA Supporters

We don't recognize often enough those businesses that support our club. If you don't already do so, be sure to support those folks that support us, either through discounts or gift certificates.

Hogan Hardwoods

Woodcraft

Craft Supplies USA

The Cutting Edge

Woodline USA

Calendar

The calendar listings are an attempt to keep you up to date on upcoming CTWA events, as well as other events of particular interest to woodturners.

August 16 - 7:00 to 9:00 PM

CTWA Meeting - American YouthWorks

Sept 3 - 9:00 AM to Noon

First Saturday - Charlie Collins' Shop

Sept 20 - 7:00 to 9:00 PM

CTWA Meeting - American YouthWorks

October 8 - 9:00 AM to Noon

First Saturday - Charlie Collins' Shop

October 18 - 7:00 to 9:00 AM

CTWA Meeting - American YouthWorks

November 5 - 9:00 AM to Noon

First Saturday - Charlie Collins' Shop

It is again time for us to start thinking about electing our officers for next year. While we normally nominate officers in October, and elect them in November, there are some advantages to at least identifying candidates before SWAT. That allows the incoming Program Chairman to see a number of potential demonstrators at SWAT and at least make some preliminary contacts.

We already have a candidate for President in President-Elect Len Brissette. Several of the present officers have agreed to continue in their present capacity if elected, but we need candidates for three offices: President-Elect, Program Chairman and Librarian. The President-Elect will serve a one year term, understudying the President, handling the Show and Tell and the Bring Back Auction and presiding when the President isn't able to attend. Librarian Marcia Tolly has served for several years now, and Program Chairman David Dick is completing his second year. Both have done a yeoman's job and are due for a rest. If you are interested in doing one of these jobs, let one of the present officers know. If you want to nominate someone, you will need to be sure that you have their permission first, but if you want to suggest someone for consideration, let one of the officers know.

Those of you that were at the July meeting have seen the fine looking patch of the CTWA logo that **Marcia Tolly** has taken the initiative to have made up. The patches are available for \$5.00 each to CTWA members. Surely you need at least one for your shop smock, then maybe one for your cap and another for your jacket. Thanks



A PBS Television program in June 2004 had an interesting sketch of the hoist that was invented by the Italian architect, Filippo Brunelleschi, who designed and built the Santa Maria del Fiore in Florence, Italy in 1420 A.D.

I made a note of the name and thought that the hoist would make an interesting and challenging woodworking project. I ended up doing a great deal of research in the public library, at the University of Texas School of Architecture

and on the internet to get the dimensions of all of the various parts. The details of that research, including the choices of woods made by Brunelleschi as well as the enormous size of many of the turned parts would fill a separate article.

I will share just a little of that information in this article. One of the amazing things that came from my research was the reference concerning the great drum. This drum required an eighteen-foot long elm log turned

Upcoming Events

The section is to attempt to keep you apprised of woodturning related activities outside our own community, including national and regional symposia.

September 16 through September 18, 2005

Georgia Association of Woodturners Symposium - Helen, Georgia
www.gawoodturner.com

September 17 and 18, 2005

7th Annual Rocky Mountain Woodturning Symposium
www.rmwoodturningsymposium.com

September 30 through October 2, 2005

SWAT Symposium - Wichita Falls, Texas
www.swaturners.org

October 15 and 16, 2005

Totally Turning Symposium - Albany, New York
www.totallyturning.com

If you know of other events that should be added to this list, please contact the Editor.

to Marcia for making the necessary arrangements and getting these patches done up for us.

down into a five-foot diameter drum on the large end and a twenty-inch drum on the smaller end, all in one piece! This would be an extremely difficult turning project today, even with modern equipment, due to the large size.

The intermediate drum was also turned from an elm log three feet in diameter and fifteen feet long. The turner who made the great drum was also commissioned to turn a sleeve of walnut wood to go on the outside of each of the drums to prevent slippage and wear. This is another amazing turning accomplishment.

Once I had sufficient information to make detailed scale drawings, I was ready to start work on my model. In most of the working and animated music boxes that I have made, my choice of wood has been Texas honey mesquite (*Prosopis juliflora*). This native wood has been a favorite of wood workers for centuries. In fact, the name comes from the Aztecs who called it "mixquitl," pronounced "mezqueet". Mesquite has a unique quality in that the radial and tangential shrinkage and expansion ratio is very nearly one to one. Thus, it does not distort or crack when worked as in most other wood. The lateral grain strength is exceptional and takes a finish very well. These qualities were critical to achieving success with the

number of very small tenons used to assemble the project. For instance, the tiny tenons on each end of the baluster spindles are 3/32" in diameter by 1/8" long.

My first problem was to address the mechanics of how the screw in the base not only worked, but also how it was made. Indexing, laying-out and hand carving the male screw threads is tedious but I was comfortable with that procedure from past experience. The female thread was an entirely different problem. Since I did not have a tap for cutting matching wooden threads on the inside of a cylinder, I would necessarily have to come up with a different solution.

I decided to make a prototype with wide male threads and relatively deep grooves and use a brass pin as a single pawl inserted through the side of the cylinder to act as a female thread. This is similar to the level-wind mechanism on many fishing reels. By turning the cylinder and screw to close tolerances and finishing the surfaces to reduce friction, it worked very well.

To address the problems of designing the power column, here are some of the factors I considered, starting with the power source.

I decided to use an eighteen-note Sankyo spring wound music mechanism. This machine is designed with a hole in the end of the peg drum that will accommodate a 1/8" shaft. The winding key is positioned at a 90 degree angle to the peg drum so that the key can be positioned on a horizontal plane, while the peg drum, with shaft inserted, can be positioned vertically. What we now have is a right angle gear box.

With the music box attached under the base, the brass shaft can extend up through the base and rotating table where the carved oxen will simulate those utilized to power the original hoist.

The turntable, on which the oxen would be attached, needed to be fixed to the vertical shaft so that it would rotate. Above the turntable, the massive helical screw that shifts the position of the cog wheels and changes direction, would need to be attached at the base, but allow the screw to turn. To accomplish this, the male threaded portion of the screw would have to act as a sleeve or bearing where the brass power shaft continued up the column, to transfer the power to the cogwheels above.

The cogwheel shaft would have to raise and lower to accommodate the changing of position by the helical screw, and also be powered by the shaft attached to the music mechanism.

This required a slip-joint of some type. Some of the alternatives considered were: Splines – but they would be difficult to make and would not have been technology available in that time period; Key-way Groove – this would work but cutting a mortise groove in round shaft requires equipment and jigs that I did not have. My solution was to saw a slot in the lower end of the power column shaft and flatten the upper end of the brass power shaft that connects to the music mechanism. This worked well to provide the rotation and allow for the vertical movement of the cogwheels. The entire column was supported on the upper end with a separate shaft inserted in a wooden bearing.

Making the cogwheels was an exercise in precision turning, indexing the wheels into equal segments and drilling the holes for the brass pegs. The relationship between the horizontal wheels on the power column and the vertical gear on the end of the hoist drum needed to be accurate in that they must mesh without binding to work correctly. They do not necessarily need to be the same diameter, but if different diameter wheels are to mesh and work properly, the spacing of the wheel cogs must be the same at the point of their intersection. In this model, I used the same diameter wheels so that all the brass cogs are the same size and spacing.

The second set of drive cogs that power the intermediate drum are an example of the use of different style and size wheels to transfer power. Although cogwheels were a relatively inefficient drive system by today's standards, they were a marvel of effectiveness and versatility.

I did not address the functional use of the hoisting ropes or guy lines that were a part of the original machine. However, I did make some single sheave blocks to hang on the lifting crane arm. These were made from mesquite wood with brass shafts and hooks. The sheaves will actually rotate in the blocks.

After completing the dimensional drawings, a plan of sequence, or "critical path," was established. A prototype base made of plywood allowed the establishing of a "floor plan" that could be transferred to the base later so that drill holes could be positioned

accurately.

We know that the main frame that supported the machine was about fifteen feet high. This gave some semblance of a prospective size to establish dimensional relationships. The relative size of the carved oxen in relation to the size of the machine was taken into consideration. The support structure was made with turned tenons on the ends of the beams that fit into drilled holes. Turning these tenons required making a tiny brass spur center and adapting a live center to stabilize the pieces. Making the balustrade required special fixtures for the lathe as well as some shop-made chisels made out of concrete nails. Assembly of the parts after each and every piece was finished and buffed with a three-step process took a period of several days. Only after everything was assembled and connected to the music mechanism could it be "test ran" to see if it all would actually work.

I must admit that I held my breath as I wound the mechanism. When I released the oxen platform and it all went to turning, I did smile. I like to think that Filippo would be pleased. I only hope that you too, and future generations, will enjoy this replica of his amazing machine.

S. Gary Roberts

Many thanks to Gary for providing this article for **The Chip Pile**. I have taken the liberty of editing it down from a much longer paper that he gave to the University of Texas School of Architecture, in order to make it fit in the space available. I left out a good deal of information on Gary's research and on Brunellschi's choices of woods for all parts of his great project. I'm sure that Gary would be willing to share the entire original paper with you if you ask.

I apologize for not having a photo of Gary's amazing music box model to accompany the story, but I cannot find one in my files, and I've waited to late to try to run one down.

For those of you interested in knowing more about the hoist and how it fit into Brunellschi's building of his revolutionary dome in the Santa Maria del Fiore, I commend to you the book **Brunellschi's Dome** by Ross King. I read it a couple of years ago, so it should still be readily available.

Editor

Fortunately for us all, this summer has again been relatively cool for Central Texas, though not so cool as last year. That, plus we've had enough rain to keep things green, a real rarity for July and August. With the reasonable weather, summer has flown by, with school starting again next week.

A good many years ago, it dawned on me that our perception of passing time is dependent on the percentage of time involved relative to the amount of time we have individually spent on this earth. I'm sure that the insight isn't original with me, but it has been helpful as age keeps creeping (or racing) up on me. Remember when you were in elementary school and it took at least six months to get from Thanksgiving to Christmas, and summers went on for an eternity? Now it's about three days from Thanksgiving to Christmas and summers take a couple of weeks. Here it is the middle of August, and it is time to start preparing for SWAT already.

As an Old Retired Guy, I feel free to set goals for myself, but equally free not to set deadlines for them. Still, there were a lot of things I wanted to accomplish this summer, and somehow I haven't gotten to most of them. I've gotten more reading done than I'd hoped, but I'm still behind. There are so many interesting books out there and so little time to get to them all. Still, I've done a lot of what I intended. I've spent more time turning than I ever have, averaging four or more hours a day. The Oneway has more than a little to do with that. It really makes turning a lot more enjoyable. I've done a few big bowls and platters, but I got sidetracked doing bottle stoppers. They sell well for me at craft shows, and I give a lot away as gifts, so I decided to do a bunch in a row to try to improve my meager spindle turning skills a bit. I've gotten a lot better with a spindle gouge, although a skew still exceeds my grasp. I know, I just need to practice! Now I need to get some more big pieces turned and try out more of what I learned from Lyle Jamieson.

The highlight of my summer was the AAW Symposium in Kansas City. The drive up I-35 isn't all that inspiring, and the trip from here to Fort Worth is a real drag, but at least things were green along the way. We wandered through the Ozarks on the way home,

and that is a lot more interesting country. Janie was happy to accompany me this year and take advantage of the fact that her best friend from California lives in Kansas City, so that she was able to spend a good deal of time visiting with her.

The Symposium was the best that I have attended to date. I remember Craig Timmerman saying after the Symposium in Pasadena that if he could take one useful point from each demonstration, it had been a success. I took home several useful points from each of the demos I saw this year, and didn't get up and walk out of any, a first. Perhaps the fact that I have a lot more experience as a turner accounts for part of the improvement in what I am able to take away from the demonstrations. I was really impressed with the demonstration I went to with Andre Martel from Montreal. His enthusiasm was infectious, and he may be even better than Stuart Batty and Lyle Jamieson in making clear how to position the tool and why. I think he would be a good candidate for a weekend with us and some hands-on training.

The Symposium was also a good chance to visit with turners that I have met from past AAW and SWAT Symposia, as well as an old Texaco colleague now living in the hills of Arkansas. All in all, it was a terrific experience.

Enough of my rambling. I need to get this newsletter finished and off to Larry to post on the website, then get out to the shop to do some turning before I start on the next SWAT newsletter.

Keep on turning,

Charlie

CLASSIFIED ADS

Free personal classified ads are available to all members of CTWA to sell, buy or trade woodworking related items. To place an ad, contact Charlie Kay at 512.295.2144 or via E-mail at ckay@austin.rr.com. Ads will be run for two months and then dropped.

FOR SALE: Powermatic Model 45. Old, but in good working order. Variable speed, one HP, 12x36, heavy (about 400 lb.). Comes with faceplates, drive cen-

ter, live center, etc. Will help you deliver. \$700.

Call Len Brissette at 512.423.3625, or E-mail at mesquite@austin.rr.net.

FOR SALE: Now you can turn those big bowls that you've always wanted to. Woodfast shortbed lathe, 20" throw, 16" centers, 1.5 HP variable speed with reverse. Includes face plate, wrenches, tool rest, spur drive,



live center. This lathe is in excellent condition and both motor and controller are brand new. Listed at \$3,400 in last year's Craft Supplies catalog. Will sell for \$1,650 and help you deliver.

Call Charlie Kay at 512.295.2144 or E-mail at ckay@austin.rr.com.

FOR SALE: Charlie Collins is going out of business and has several items to sell. Contact Charlie at his shop, 512.990.1022, for a list of items and prices. If he is not there, leave your name and phone number and he will call you back. Among the items he has for sale are:

- Craftsman radial arm saw
- random orbital sander
- router table with bits and Hitachi router
- detail sander
- work table 4'X7'
- work table 2'x5'

(Your Editor photographed these items, but accidentally deleted the photos. Sorry.)

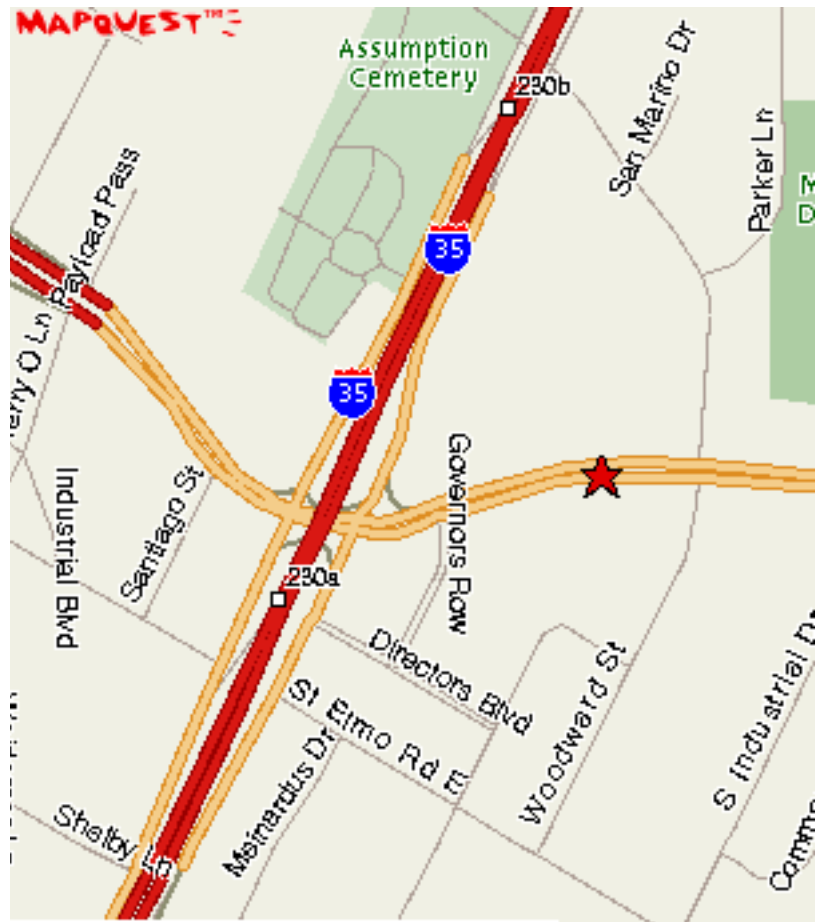
FOR SALE: Small shop air compressor, Gardner-Denver Model 29F, 150 psig, 0.5 HP Dayton motor, small storage tank. Excellent condition, an "oldie but goodie." \$50.

Small woodworking bench vise, \$15.

Call Stacey Hager at 512.282.1036 or E-mail at staceyhager@hotmail.com.

Meeting Location

The CTWA meets at American Youth-Works, 1901 East Ben White Boulevard (Texas 71) in south Austin. The building is on the south side of Ben White, just east of Interstate 35. The best entry is off Woodward Street, just south of a little strip center. You enter an alleyway into a lighted parking lot. We will enter through the back door. As you drive in, you will see a truck dock in the back of the building with a big roll-up white door. The entryway is just to the right of the truck dock. Because of the construction at Ben White and I-35, folks from the north may want to exit I-35 at Woodward and proceed south on Woodward across Ben White. Folks from the south might do better to go east on St. Elmo, then north on Woodward. Those coming from the west on Ben White will just have to fight their way through until the construction is finished. See you at the meeting.



THE CHIP PILE

CENTRAL TEXAS WOODTURNERS ASSOCIATION
A CHAPTER OF THE AMERICAN ASSOCIATION OF WOODTURNERS

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To: